

NOTICE RE: CERTIFICATES OF CORRECTION

DATE : 3-29-02

Paper No.: \_\_\_\_\_

TO : Supervisor, Art Unit 1642

SUBJECT : Certificate of Correction Request in Patent No.: 5807715

A response to the following question is requested with respect to the accompanying request for a certificate of correction.

With respect to the change(s) requested, correcting Office and/or Applicant's errors, should the patent read as shown in the certificate of correction? No new matter should be introduced, nor should the scope or meaning of the claims be changed.

*Mr. Julie Burke*

*E. James*

**PLEASE COMPLETE THIS FORM AND  
RETURN WITH FILE, WITHIN 7 DAYS,  
TO CERTIFICATES OF CORRECTION BRANCH - PK 3-915/922  
PALM LOCATION 7580 - TEL. NO. 305-8309**

**THANK YOU FOR YOUR ASSISTANCE!**

© Note your decision, regarding the changes requested in the Request for Certificate of Correction, by placing a check mark (✓) in the box that reflects your decision, which corresponds to the question checked above.

YES

NO

Comments below

Comments: \_\_\_\_\_

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*Anff*

Supervisor

*01/1642*

Art Unit

PTO/SB/44 (10-96)

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

PATENT NO : 5,807,715

DATED : September 15, 1998

INVENTOR(S): S.L. Morrison, Herzenberg, L.A., and Oi, V.T.

It is certified that error appears in the above-identified patent and that said Letters Patent  
are hereby corrected as shown below:

In the Title [54], delete "LYMPHOCYTE" and replace with --LYMPHOCYTIC--; after "IMMUNOGLOBULIN", add --AND FRAGMENTS--.

In the Inventors [75], delete "Scarsdale, N.Y." and replace with --Los Angeles--; delete "Menlo Park" and replace with --Mountain View--; delete "both" and replace with --all--.

In the Assignee [73], delete "Assignee" and replace with --Assignees--; after "Calif." add --, and The Trustees of Columbia University, New York, N.Y.--.

In References Cited [56], after "Seno et al 1983 Nucleic", delete "Acid" and replace with --Acids-- after "Research 11(3)", delete ";" and replace with --:--.

In References Cited [56], after "Dolby et al 1980 PNAS 77(10)" add --:--.

Column 1, line 2, delete "LYMPHOCYTE" and replace with --LYMPHOCYTIC--.

Column 1, line 5, after "IMMUNOGLOBULIN" add --AND FRAGMENTS--.

Column 1, line 16, add the paragraph --The work described herein was supported in part by grants from the National Institutes of Health (NIH), including AI-00408, AI-08917, CA-04681, and CA-16858. The United States Government has certain rights in the invention.--

Column 1, line 19, delete "1.".

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PATENT NO : 5,807,715

DATED : September 15, 1998

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It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 1, line 41, delete "2.".

Column 1, line 61, after "functional", add --,--; after "assembled", add --,--.

Column 1, line 66, delete "mouse-" and replace with --mouse:-

Column 1, line 67, delete ":".

Column 3, line 26, delete "prepar" and replace with --prepara--.

Column 3, line 32, delete "CDNA" and replace with --cDNA--.

Column 4, line 45, delete "CDNA" and replace with --cDNA--.

Column 4, line 52, delete "CDNA" and replace with --cDNA--.

Column 4, line 59, delete "CDNA" and replace with --cDNA--.

Column 4, line 65, delete "Joining" and replace with --joining--.

Column 8, line 2, after "immunization", add --,--.

Column 8, line 21, delete "VH" and replace with --V<sub>H</sub>--.Column 8, line 22, delete "V<sub>K</sub>" and replace with --V<sub>K</sub>--  
(Greek letter kappa subscripted).MAILING ADDRESS OF SENDER: Fish & Neave  
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- PATENT NO : 5,807,715

DATED : September 15, 1998

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It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 8, line 24, delete "VH" and replace with --V<sub>H</sub>--.

Column 8, line 29, delete "V<sub>K</sub>" and replace with --V<sub>K</sub>-- (Greek letter kappa subscripted).

Column 8, line 31, delete "J<sub>K</sub>" and replace with --J<sub>K</sub>-- (Greek letter kappa subscripted); delete "C<sub>K</sub>" and replace with --C<sub>K</sub>-- (Greek letter kappa subscripted).

Column 9, line 9, delete "Five" and replace with --Five--; delete "Chemicals" and replace with --Chemicals--.

Column 9, line 19, delete "VH-VL" and replace with --V<sub>H</sub>-V<sub>L</sub>--.

Column 9, line 57, delete "H<sub>2</sub>L<sub>2</sub>" and replace with --H<sub>2</sub>L<sub>2</sub>--.

Column 9, line 67, delete "K" and replace with --k--; delete "antiodes" and replace with --antibodies--.

Column 10, line 5, after "expected" add --,--.

Column 10, line 10, delete "VH" and replace with --V<sub>H</sub>--; delete "V<sub>K</sub>" and replace with --V<sub>K</sub>-- (Greek letter kappa subscripted).

Column 10, line 14, delete "mouse: human" and replace with --mouse:human--.

Column 10, line 22, delete "VH" and replace with --V<sub>H</sub>--; delete "V<sub>K</sub>" and replace with --V<sub>K</sub>-- (Greek letter kappa subscripted).

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PATENT NO : 5,807,715

DATED : September 15, 1998

INVENTOR(S): S.L. Morrison, Herzenberg, L.A., and Oi, V.T.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 10, line 36, delete "Mr" and replace with --Mr--.

Column 10, line 42, delete "Mr" and replace with --Mr--.

Column 10, line 54, delete "hybri-doma-" and replace with --hybridoma--.

Column 11, line 5, delete "V<sub>k</sub>" and replace with --V<sub>k</sub>-- (Greek letter kappa subscripted).

Column 11, line 10, delete "mouse: human" and replace with --mouse:human--.

Column 11, line 21, delete "use" and replace with --used--.

Column 11, line 35, delete "IgG<sub>1</sub>, IgG<sub>2</sub>, IgG<sub>3</sub>, IgG<sub>4</sub>, rabbit IgG and mouse IgG," and replace with --IgG1, IgG2, IgG3, IgG4, rabbit IgG and mouse IgG3--.

Column 11, line 37, delete "(delta)" and replace with --Δ-- (Greek letter capital delta).

Column 11, line 41, delete "V<sub>k</sub>" and replace with --V<sub>k</sub>-- (Greek letter kappa subscripted).

Column 11, line 43, after "Ann" add --.--.

Column 11, line 44, delete "V<sub>k</sub>" and replace with --V<sub>k</sub>-- (Greek letter kappa subscripted).MAILING ADDRESS OF SENDER: Fish & Neave  
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PATENT NO : 5,807,715

DATED : September 15, 1998

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It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 11, line 60, delete "pure, >95%" and replace with --pure (>95%)--.

Column 11, line 63, delete "mouse-human" and replace with --mouse:human--.

Column 11, line 64, delete "IgG<sub>3</sub>" and replace with --IgG3--.

Column 12, line 3, delete "IgG<sub>1</sub>" and replace with --IgG1--.

Column 12, line 10, delete "affinity purified" and replace with --affinity-purified--.

Column 12, line 22, delete "labelling" and replace with --labeling--.

Column 12, line 26, delete "pp." and replace with --p.--.

Column 12, line 31, after "Kornfeld" add --,--.

Column 12, line 32, delete "Wigzell Proc," and replace with --Wigzell, Proc.--.

Column 12, line 33, after "et al." add --,--.

Column 12, line 42, delete "IgG<sub>1</sub>-IgG<sub>2a</sub>" and replace with --IgG1-IgG2a--.

Column 12, line 64, delete "IgG<sub>1</sub>" and replace with --IgG1--; delete "IgG<sub>2a</sub>" and replace with --IgG2a--.

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Column 12, line 65, delete "IgG<sub>2s</sub>" and replace with --IgG2a--;  
delete "IgG<sub>1</sub>" and replace with --IgG1--.Column 13, line 4, delete "T<sub>4</sub>" and replace with --T4--.

Column 13, line 43, after "Gilbert" add --,--.

Column 13, line 65, delete "Dangi" and replace with --Dangi--

Column 14, line 24, delete "bateria" and replace with --  
bacteria--.

Column 14, line 41, delete "C." and replace with --C--.

Column 14, line 53, delete "labelled" and replace with --  
labeled--.Column 15, line 5, delete "IgG<sub>1</sub>" and replace with --IgG1--;  
delete "IgG<sub>2a</sub>" and replace with --IgG2a--.Column 15, line 25, delete "pHGX1C<sub>v2</sub>aB" and replace with --  
pHGX1C<sub>v1</sub>B--.Column 15, line 27, delete "Trp" and replace with --TRP<sup>+</sup>--.Column 15, line 39, delete "Trp" and replace with --TRP<sup>+</sup>--.Column 15, line 44, delete "IgG<sub>1</sub>" and replace with --IgG1--.MAILING ADDRESS OF SENDER: Fish & Neave  
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It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 15, line 45, delete "IgG<sub>2a</sub>" and replace with --IgG2a--Column 15, line 49, delete "IgG<sub>2a</sub>" and replace with --IgG2a--Column 15, line 50, delete "IgG<sub>1</sub>" and replace with --IgG1--.

Column 15, line 46, delete "-7" and replace with --7--.

Column 16, line 2, delete "IgG<sub>1</sub>" and replace with --IgG1--.Column 16, line 3, delete "IgG<sub>2a</sub>" and replace with --IgG2a--.Column 16, line 18, delete "Mr" and replace with --M<sub>r</sub>--.Column 16, line 29, delete "are" and replace with --is--;  
delete "IgG<sub>1</sub>" and replace with --IgG1--.Column 16, line 30, delete "IgG<sub>2a</sub>" and replace with --IgG2a--Column 16, line 44, delete "IgG<sub>2a</sub>" and replace with --IgG2a--Column 17, line 63 (claim 7), delete "P<sub>3</sub>" and replace with --P3--.Column 18, line 57 (claim 17), delete "P<sub>3</sub>" and replace with --P3--.MAILING ADDRESS OF SENDER: Fish & Neave  
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Column 19, line 33 (claim 27), delete "P<sub>3</sub>" and replace with --P3--.

Column 20, line 50 (claim 41), delete "39" and replace with --37--.

Column 20, line 52 (claim 41), delete "are".

Column 20, line 53 (claim 41), delete "are".

Column 20, line 58 (claim 42), delete "are".

Column 20, line 59 (claim 42), delete "are".

Column 21, line 13, shift line beginning with "express" to left margin.

Column 21, line 14, shift line beginning with "specifically" to left margin.

Column 21, line 29 (claim 48), delete "arc" and replace with --are--.

Column 22, line 43 (claim 59), delete "arc" and replace with --are--.

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US005807715A

## United States Patent [19]

Morrison et al.

[11] Patent Number: 5,807,715

[45] Date of Patent: Sep. 15, 1998

[54] METHODS AND TRANSFORMED  
MAMMALIAN LYMPHOCYTE CELLS FOR  
PRODUCING FUNCTIONAL ANTIGEN-  
BINDING PROTEIN INCLUDING CHIMERIC  
IMMUNOGLOBULIN

[75] Inventors: Sherie L. Morrison, Scarsdale, N.Y.;  
Leonard A. Herzenberg, Stanford;  
Vernon T. Oi, Menlo Park (both of  
Calif.)

[73] Assignee: The Board of Trustees of The Leland  
Stanford Junior University, Stanford,  
Calif.

[21] Appl. No.: 266,154

[22] Filed: Jun. 27, 1994

## Related U.S. Application Data

[63] Continuation of Ser. No. 893,610, Jun. 3, 1992, abandoned,  
which is a continuation of Ser. No. 675,106, Mar. 25, 1991,  
abandoned, which is a continuation of Ser. No. 441,189,  
Nov. 22, 1989, abandoned, which is a continuation of Ser.  
No. 90,669, Aug. 28, 1987, abandoned, which is a continuation-in-part of Ser. No. 644,473, Aug. 27, 1984, abandoned.

[51] Int. Cl. <sup>6</sup> C12N 15/00; C12N 15/13;  
C07K 16/00

[52] U.S. Cl. 435/69.6; 435/172.3; 435/326;  
530/387.1; 530/387.3; 536/23.53

[58] Field of Search 435/69.6, 246.27,  
435/320.1, 172.3, 326; 530/387.3, 387.1;  
935/15; 536/23.53

## [56] References Cited

## U.S. PATENT DOCUMENTS

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4,816,567	3/1989	Cabilly	530/387

## FOREIGN PATENT DOCUMENTS

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8303971	11/1983	WIPO

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- Ochi et al., "Functional immunoglobulin M production after transfection of cloned immunoglobulin heavy and light chain genes into lymphoid cells", *Proc. Natl. Acad. Sci. USA*, vol. 80, 6351-55 (1983).
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Primary Examiner—Lila Feisee

Assistant Examiner—Julie E. Reeves

Attorney, Agent, or Firm—Fish &amp; Neave; Vicki S. Veenker; Edward F. Mullowney

[57]

## ABSTRACT

Methods for producing functional immunoglobulin are provided. The methods involve transfecting and expressing exogenous DNA coding for the heavy and light chains of immunoglobulin. In some embodiments, chimeric immunoglobulins are provided having variable regions from one species and constant regions from another species by linking DNA sequences encoding for the variable regions of the light and heavy chains from one species to the constant regions of the light and heavy chains respectively from a different species. Introduction of the resulting genes into mammalian host cells under conditions for expression provides for production of chimeric immunoglobulins having the specificity of the variable region derived from a first species and the physiological functions of the constant region from a different species.

62 Claims, 2 Drawing Sheets

